

**Please enter the following amended claims:**

B1

1. (Twice Amended) A mobile communication system comprising:  
transmission control means for providing a vacant period, in which no communication data is present, in one or more of communication frames, and inserting a first control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and transmission power control for a forward link in said vacant period.

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3. (Twice Amended) A mobile communication system as set forth in claim 2, wherein said time interval of said first control signal inserted during said vacant period is set to be longer than a time interval of said first control signal in a communication mode where transmission data are present in said communication frame which does not include any vacant periods.

4. (Twice Amended) A mobile communication system as set forth in claim 1, wherein said transmission control means provides a vacant period from a timing immediately after a second control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

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6. (Twice Amended) A mobile communication system as set forth in claim 1, wherein said transmission control means transmits a third control signal which includes a pilot

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signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link immediately after end of said vacant period.

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8. (Twice Amended) A mobile communication system as set forth in claim 1, wherein said transmission control means provides a vacant period from a timing immediately after a second control signal which includes a transmission power control information for a reverse link.

9. (Twice Amended) A mobile communication system as set forth in claim 1, wherein said transmission control means transmits a third control signal which includes a transmission power control information for a reverse link immediately after end of said vacant period.

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15. (Twice Amended) A mobile communication system as set forth in claim 6, wherein said third control signal which includes a transmission power control information for a reverse link.

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16. (Amended) A mobile communication system comprising:

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transmission control means for providing a vacant period in which no communication data is present, in one or more of communication frames, from a timing immediately after a second control signal for maintaining a communication quality, and transmitting a third control signal for maintaining the communication quality immediately after end of said vacant period,

each of said second and third control signals being a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

17. (Amended) A mobile communication system comprising:

transmission control means for providing a vacant period in which no communication data is present, in one or more of communication frames, from a timing immediately after a second control signal for maintaining a communication quality, and transmitting a third control signal for maintaining the communication quality immediately after end of said vacant period,

said second control signal being a transmission power control for a reverse link and third control signal being a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

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25. (Twice Amended) A communication control method comprising:

a step of providing a vacant period, in which no communication data is present, in one or more of communication frames, and

a step of inserting a first control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link in said vacant period, for transmission.

28. (Twice Amended) A communication control method as set forth in claim 25, wherein in said step of providing the vacant period, said vacant period is provided immediately after a second control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

30. (Twice Amended) A communication control method as set forth in claim 25, further comprising:

a step of transmitting a third control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and transmission power control for a forward link.

32. (Twice Amended) A communication control method as set forth in claim 25, wherein said step of providing the vacant period, said vacant period is provided immediately after a second control signal which includes a transmission power control information for reverse link.

33. (Twice Amended) A communication control method as set forth in claim 25, further comprising:

a step of transmitting a third control signal which includes a transmission power control information for reverse link immediately after end of said vacant period.

39. (Twice Amended) A communication control method as set forth in claim 30, wherein said third control signal includes a transmission power control information for reverse link.

49. (Twice Amended) A base station in a mobile communication system, comprising:  
transmission control means for providing a vacant period, in which no communication data is present, in one or more of communication frames, and inserting a first control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link in said vacant period.

52. (Twice Amended) A base station as set forth in claim 49, wherein said transmission control means provides a vacant period from a timing immediately after a second

control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

54. (Twice Amended) A base station as set forth in claim 49, wherein said transmission control means transmits a third control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link immediately after end of said vacant period.

56. (Twice Amended) A base station as set forth in claim 49, said transmission control means provides a vacant period from a timing immediately after a second control signal which includes a transmission power control information for reverse link.

57. (Twice Amended) A base station as set forth in claim 49, wherein said transmission control means transmits a third control signal which includes a transmission power control information for reverse link immediately after end of said vacant period.

72. (Twice Amended) A mobile station in a mobile communication system, comprising:

quality measuring means for receiving a first control signal for maintaining a communication quality transmitted in a vacant period in which no communication data is present, in one or more of communication frames and measuring a reception quality on the basis of said first control signal; and

transmitting means for generating and transmitting a transmission power control information for a forward link according to said reception quality, wherein said first control signal includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

73. (Twice Amended) A mobile station in a mobile communication system, comprising:

demodulation means for receiving a first control signal for maintaining a communication quality transmitted in a vacant period in which no communication data is present, in one or more of communication frames and demodulating a communication data using the first control signal,

wherein said first control signal includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link..

75 (Twice Amended) A mobile station in a mobile communication system, comprising:

quality measuring means for receiving a second control signal for maintaining a communication quality transmitted at a timing immediately before a vacant period in which no

communication data is present, in one or more of communication frames and measuring a reception quality on the basis of said second control signal; and

transmitting means for generating and transmitting a transmission power control information for a forward link according to said reception quality,

wherein said second control signal includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

76. (Amended) A mobile station in a mobile communication system, comprising:

demodulation means for receiving a second control signal for maintaining a communication quality transmitted at a timing immediately before a vacant period in which no communication data is present, in one or more of communication frames and demodulating a communication data using said second control signal,

wherein said second control signal includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

78. (Twice Amended) A mobile station in a mobile communication system, comprising:

quality measuring means for receiving a second control signal for maintaining a communication quality transmitted at a timing immediately before a vacant period in which no communication data is present, in one or more of communication frames and receiving a third control signal for maintaining the communication quality transmitted at a timing immediately



after said vacant period, and measuring a reception quality on the basis of said second or third control signal; and

transmitting means for generating and transmitting a transmission power control information for a forward link according to said reception quality,

wherein said second control signal includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

79. (Twice Amended) A mobile station in a mobile communication system, comprising:

demodulation means for receiving a second control signal for maintaining a communication quality transmitted at a timing immediately before a vacant period in which no communication data is present, in one or more of communication frames and receiving a third control signal for maintaining the communication quality transmitted at a timing immediately after said vacant period, and demodulating a communication data using said second or third control signal,

wherein said second control signal includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

80. (Twice Amended) A mobile station in a mobile communication system, comprising:

quality measuring means for receiving a second control signal for maintaining a communication quality transmitted at a timing immediately before a vacant period in which no communication data is present, in one or more of communication frames and receiving a third control signal for maintaining the communication quality transmitted at a timing immediately after said vacant period, and measuring a reception quality on the basis of said third control signal;

transmitting means for generating and transmitting a transmission power control information for a forward link according to said reception quality; and

means for controlling a transmission power in a reverse link on the basis of said second control signal,

wherein said third control signal includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

81. (Twice Amended) A mobile station in a mobile communication system, comprising:

demodulation means for receiving a second control signal for maintaining a communication quality transmitted at a timing immediately before a vacant period in which no communication data is present, in one or more of communication frames and receiving a third control signal for maintaining the communication quality transmitted at a timing immediately after said vacant period, and demodulating a communication data using said third control signal; and

means for controlling a transmission power in a reverse link on the basis of said second control signal,

wherein said third control signal includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

82. (Twice Amended) A mobile station in a mobile communication system, comprising:

demodulation means for receiving a second control signal for maintaining a communication quality transmitted at a timing immediately before a vacant period in which no communication data is present, in one or more of communication frames and receiving a third control signal for maintaining the communication quality transmitted at a timing immediately after said vacant period, and demodulating a communication data using said third control signal;

quality measuring means for measuring a reception quality on the basis of said third control signal;

transmitting means for generating and transmitting a transmission power control information in a forward link according to the reception quality; and

means for controlling a transmission power in a reverse link on the basis of said second control signal,

wherein said third control signal includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

88. (Twice Amended) A mobile station as set forth in claim 72, wherein said first control signal includes a pilot signal to be used for a transmission power control for reverse link.

100. (Amended) A mobile communication system as set forth in claim 96, wherein said transmission control means transmits a third control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and transmission power control for a forward link immediately after end of said vacant period.

101. (Amended) A mobile communication system as set forth in claim 96, wherein said transmission control means provides a vacant period from a timing immediately after a second control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

102. (Amended) A mobile communication system as set forth in claim 96, wherein said transmission control means transmits a third control signal which includes a transmission power control information for a reverse link immediately after end of said vacant period.

103. (Amended) A mobile communication system as set forth in claim 99, wherein said second control signal includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

105. (Amended) A mobile communication system as set forth in claim 96, wherein said transmission control means provides a vacant period from a timing immediately after a second control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link, and transmits a third control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link immediately after end of said vacant period.

118. (Amended) A communication control method as set forth in claim 114, further comprising:

transmitting a third control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link immediately after end of said vacant period.

119. (Amended) A communication control method as set forth in claim 114, wherein in said providing the vacant period, said vacant period is provided immediately after a second control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

120. (Amended) A communication control method as set forth in claim 114, further comprising:

transmitting a third control signal which includes a transmission power control information for a reverse link immediately after end of said vacant period.

121. (Amended) A communication control method as set forth in claim 117, wherein said second control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

123. (Amended) A communication control method as set forth in claim 114, further comprising:

transmitting a third control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link immediately after end of said vacant period,

wherein in said providing the vacant period, said vacant period is provided immediately after a second control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

136. (Amended) A base station as set forth in claim 132, wherein said transmission control means transmits a third control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and transmission power control for a forward link immediately after end of said vacant period.

137. (Amended) A base station as set forth in claim 132, wherein said transmission control means provides said vacant period from a timing immediately after a second control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

138. (Amended) A base station as set forth in claim 132, wherein said transmission control means transmits a third control signal which includes a transmission power control information for a reverse link immediately after end of said vacant period.

139. (Amended) A base station as set forth in claim 135, wherein said second control signal includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

141. (Amended) A base station as set forth in claim 132, wherein said transmission control means provides said vacant period from a timing immediately after a second control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link, and transmits a third control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link immediately after end of said vacant period.

149. (Amended) A mobile station in a mobile communication system, comprising:  
quality measuring means for receiving a second control signal for maintaining a communication quality transmitted at a timing immediately before a vacant period in which no



communication data is present, in one or more of communication frames and receiving a third control signal for maintaining the communication quality transmitted at a timing immediately after said vacant period, and measuring a reception quality on the basis of said second or third control signal; and

transmitting means for generating and transmitting a transmission power control information for a forward link according to said reception quality,

wherein said third control signal includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

150. (Amended) A mobile station in a mobile communication system, comprising:

demodulation means for receiving a second control signal for maintaining a communication quality transmitted at a timing immediately before a vacant period in which no communication data is present, in one or more of communication frames and receiving a third control signal for maintaining the communication quality transmitted at a timing immediately after said vacant period, and demodulating a communication data using said second or third control signal,

wherein said third control signal includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

**Please enter the following new claims:**

154. (New) A mobile station in a mobile communication systems set forth in claim 149, further comprising:

receiving means for receiving a first control signal which includes a transmission power control information for a reverse link, and

controlling means for controlling a transmission power in said reverse link on the basis of said first control signal.

155. (New) A mobile station in a mobile communication system as set forth in claim 150, further comprising:

receiving means for receiving a first control signal which includes a transmission power control information for a reverse link, and

controlling means for controlling a transmission power in said reverse link on the basis of said first control signal.

156. (New) A mobile communication system comprising:

transmission control means for providing a vacant period, in which no communication data is present, in one or more of communication frames from a timing immediately after a

second control signal which include a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

157. (New) A mobile communication system comprising:

transmission control means for providing a vacant period, in which no communication data is present, in one or more of communication frames, and transmitting a third control signal which include a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link immediately after end of said vacant period.

158. (New) A mobile communication system comprising:

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C1 transmission control means for providing a vacant period, in which no communication data is present, in one or more of communication frames from a timing immediately after a second control signal which include a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link, and transmitting a third control signal which include a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link immediately after end of said vacant period.

159. (New) A base station in a mobile communication system comprising:

transmission control means for providing a vacant period, in which no communication data is present, in one or more of communication frames from a timing immediately after a second control signal which include a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.

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160. (New) A base station in a mobile communication system comprising:

transmission control means for providing a vacant period, in which no communication data is present, in one or more of communication frames, and transmitting a third control signal which include a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link immediately after end of said vacant period.


161. (New) A base station in a mobile communication system comprising:

transmission control means for providing a vacant period, in which no communication data is present, in one or more of communication frames from a timing immediately after a second control signal which include a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link, and transmitting a third control signal which include a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link immediately after end of said vacant period.

162. (New) A mobile communication system including a base station and at least one of mobile stations, said base station comprising:

a transmission control unit provides a vacant period, in which no communication data is present, in one or more communication frames of communication channel of forward link from said base station to at least one of said mobile stations by compressing data of said communication frame;

an inserting unit inserts a first control signal which includes a transmission power information for reverse link in said vacant period.

 163. (New) A mobile communication system as set forth in claim 162, wherein said transmission control unit transmits a third control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and transmission power control for a forward link immediately after end of said vacant period.

164. (New) A mobile communication system as set forth in claim 162, wherein said transmission control unit provides a vacant period from a timing immediately after a second control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for s forward link.

165. (New) A mobile communication system as set forth in claim 162, wherein said transmission control unit provides a vacant period from a timing immediately after a second control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link, and transmits a third control signal which includes a pilot signal to be used for at least one of demodulation of the communication data and transmission power control for a forward link immediately after end of said vacant period.

166. (New) A mobile communication system including a base station and at least one of mobile stations, said base station comprising:

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transmission control unit provides a vacant period, in which no communication data is present, in one or more communication frames of communication channel of forward link from said base station to at least one of said mobile stations by compressing data of said communication frame, and transmitting a third control signals which includes a pilot signal to be used for at least one of demodulation of the communication data and transmission power control for a forward link after end of said vacant period.

167. (New) A mobile communication system including a base station and at least one of mobile stations, said base station comprising:

transmission control unit provides a vacant period, in which no communication data is present, in one or more communication frames of communication channel of forward link from said base station to at least one of said mobile stations by compressing data of said communication frame, wherein said transmission control unit provides said vacant period from a timing immediately after a second control signal which include a pilot signal to be used for at least one of demodulation of the communication data and a transmission power control for a forward link.